Application Serial No. 10/788,487
Amendment after final filed April 17, 2008
Reply to final Office Action mailed November 28, 2007

REMARKS

Claims 1-12 are pending and under consideration. Claims 1 and 7 have been amended. Support for the amendments to the claims may be found in the specification from page 12, line 35 to page 13, line 3, at page 14, lines 34, 35, and 36, and is shown in Fig. 8. This amendment is believed to place the application in condition for allowance, and entry therefore is respectfully requested. In the alternative, entry of this amendment is requested as placing the application in better condition for appeal by, at least, reducing the number of issues outstanding. Further reconsideration is requested based on the foregoing amendment and the following remarks.

Response to Arguments:

The Applicants appreciate the consideration given to their arguments. The Applicants, however, are disappointed that their arguments were not found to be persuasive. The final Office Action asserts in section 1, at page 2, that:

> Applicant argues Luft does not suggest the amended limitation: using concatenation setting information obtained from concatenation setting information table using an identifier. However, Examiner respectfully disagrees. Examiner would like to direct the applicant to the rejection of claims 1 and 7 below, and Table 1 and column 15, lines 31-44, where the above limitation is taught by Luft.

This is submitted to be incorrect. Table 1, rather, merely shows concatenations corresponding to each of the letters A-C in Figs. 8A and 8B, not "an identifier from the ring switching request" as recited in, for example, claim 1. The letters A-C, in turn, identify the *type* of concatenation in Figs. 8A and 8B, not "concatenation setting information, corresponding to the identifier, from a concatenation setting information table that includes concatenation setting information for each identifier of transmission apparatuses forming the network" as also recited in, for example, claim 1. In particular, as described at column 15, lines 41-44:

> Each link is labeled with one of the letters A-C to identify the type of concatenation. Table 1 identifies the concatenations corresponding to each letter (concatenations in this example conform to current standards).

Figs. 8A-8B, moreover, shows provisioning of varying size pipes around a BLSR and changing concatenations, not "concatenation setting information, corresponding to the identifier, from a concatenation setting information table that includes concatenation setting information for each identifier of transmission apparatuses forming the network" as also recited in, for example, claim 1. In particular, as described at column 15, lines 29, 30, and 31:

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FIGS. 8A-8B illustrate example provisioning of varying size pipes around a BLSR and changing concatenations according to one embodiment of the invention.

In fact, in Luft, the logical interfaces will be reprogrammed on the nodes adjacent to the failure, but the destinations in the forwarding tables will not be changed. In particular, as described at column 12, lines 16-20:

> On the nodes adjacent to the failure, the logical interfaces will be reprogrammed, but the destinations in the forwarding tables will not be changed (This is an effect of having two switch mechanisms providing alternative paths; as such, this may not be required in other implementations).

Since, in Luft, the logical interfaces will be reprogrammed on the nodes adjacent to the failure, but the destinations in the forwarding tables will not be changed, Luft has no need for "concatenation setting information, corresponding to the identifier, from a concatenation setting information table that includes concatenation setting information for each identifier of transmission apparatuses forming the network" as recited in, for example, claim 1.

In Luft, moreover, the other *nodes* in the ring update their cross connect tables and logical interfaces in accordance with the failure detected by the detecting *node*, rather than in accordance with "concatenation setting information, corresponding to the identifier, from a concatenation setting information table that includes concatenation setting information for each identifier of transmission apparatuses forming the network" as recited in, for example, claim 1. In particular, as described at column 12, lines 41-45:

> At block 613, the node communicates the failure to other nodes in the ring. At block 615, the other nodes in the ring update their cross connect tables and logical interfaces in accordance with the failure detected by the detecting node.

Since, in Luft, the other nodes in the ring update their cross connect tables and logical interfaces in accordance with the failure detected by the detecting node, Luft has no need for "concatenation setting information, corresponding to the identifier, from a concatenation setting information table that includes concatenation setting information for each identifier of transmission apparatuses forming the network" as recited in, for example, claim 1.

Claims 1 and 7, in any case, have been amended further to recite "wherein the ring switching request is sent from one of the transmission apparatuses that detects the failure, and at least one of the transmission apparatuses performs line switching after receiving the ring switching request that goes around the ring network." Luft does not suggest using the ring

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switching request that goes around the ring network for making a concatenation setting as claimed. According to the claimed invention, concatenation setting for a protection line is performed when a switching request is received, not when a main signal is received after the switching request goes around the ring network. Luft does not suggest the features in the amended claims 1 and 7

Further reconsideration is thus requested.

Claim Rejections - 35 U.S.C. § 103:

Claims 1-5 and 7-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7,209,436 to Luft et al. (hereinafter "Luft"). The rejection is traversed to the extent it would apply to the claims as amended. Reconsideration is earnestly solicited.

The second clause of claim 1 recites:

The ring switching request is sent from one of the transmission apparatuses that detects the failure, and at least one of the transmission apparatuses performs line switching after receiving the ring switching request that goes around the ring network.

Luft neither teaches, discloses, nor suggests a "ring switching request is sent from one of the transmission apparatuses that detects the failure, and at least one of the transmission apparatuses performs line switching after receiving the ring switching request that goes around the ring network," as recited in claim 1. In Luft, rather, the other nodes in the ring update their cross connect tables and logical interfaces in accordance with the failure detected by the detecting node, as discussed above.

The third clause of claim 1 recites:

Obtaining an identifier from the ring switching request and concatenation setting information, corresponding to the identifier, from a concatenation setting information table that includes concatenation setting information for each identifier of transmission apparatuses forming the network.

Luft neither teaches, discloses, nor suggests "obtaining an identifier from the ring switching request and concatenation setting information, corresponding to the identifier, from a concatenation setting information table that includes concatenation setting information for each identifier of transmission apparatuses forming the network." In Luft, rather, the other nodes in the ring update their cross connect tables and logical interfaces in accordance with the failure

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detected by the detecting node, as discussed above.

The final Office Action acknowledges graciously at page 4, in the first full paragraph, that "Luft fails to explicitly teach a detecting part for detecting a ring switching request from a received signal including identifiers of transmission apparatuses between which a failure occurs." The final Office Action attempts to compensate for this deficiency of Luft by asserting in the second full paragraph at page 4 that:

> However, in another embodiment Luft teaches a detecting part for detecting a ring switching request from a received signal (Fig. 5; CC 509; col. 8, lines 44-56) including identifiers of transmission apparatuses between which a failure occurs (col. 13, lines 1-5).

This is submitted to be incorrect. In Luft, rather, the other nodes in the ring update their cross connect tables and logical interfaces in accordance with the failure detected by the detecting node, as discussed above. In Luft, in fact, there is no "received signal including identifiers of transmission apparatuses between which a failure occurs," to be detected at all.

The CC 509, moreover, detects *failures*, maintains a BLSR state machine, and updates the TDM cross connect table in response to changes in the BLSR state machine, rather than "detecting a ring switching request from a received signal," let alone a ring switching request "including identifiers of transmission apparatuses between which a failure occurs," as recited in the second clause of claim 1. In particular, as described at column 8, lines 44, 45, and 46:

> The CC 509 detects failures, maintains a BLSR state machine, and updates the TDM cross connect table in response to changes in the BLSR state machine.

Since, in Luft, the CC 509 detects failures, maintains a BLSR state machine, and updates the TDM cross connect table in response to changes in the BLSR state machine, Luft has no need for a "detecting part detecting a ring switching request from a received signal, including identifiers of transmission apparatuses between which a failure occurs," as recited in the second clause of claim 1.

CC 509, moreover, *sends* a message to update the logical interfaces i.e. the logical connection *from* a first network element *to* another network element or node, rather than "detecting a ring switching request from a received signal," let alone a ring switching request "including identifiers of transmission apparatuses between which a failure occurs," as recited in the second clause of claim 1. In particular, as described at column 8, lines 46-52:

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The CC 509 also sends a message to update the logical interfaces for packet BLSR protection switching. Typically an interface is a physical interface or port. A logical interface is the logical connection from a first network element to another network element or node which may or may not be adjacent to the first network element.

Since, in Luft, the CC 509 sends a message to update the logical interfaces i.e. the logical connection from a first network element to another network element or node, Luft has no need for a "detecting part detecting a ring switching request from a received signal, including identifiers of transmission apparatuses between which a failure occurs," as recited in the second clause of claim 1.

Nor does Luft describe identifiers of transmission apparatuses between which a failure occurs at column 13, lines 1-5 contrary to the assertion in the final Office Action. Loft, rather, is describing how one of the interfaces will be the working interface while the other interface will be the protecting interface, and a circuit identifier is associated to either a logical interface or a alternate interface in the layer 2/3 forwarding table. In particular, as described at column 12, lines 66 and 67, continuing at column 13, lines 1-5:

One of the interfaces will be the working interface while the other interface will be the protecting interface. In the layer 2/3 forwarding table, a circuit identifier is associated to either a logical interface or a alternate interface. Upon a failure notification, the alternate interface manager will alter the data structure to reference the logical interface acting as the protecting interface.

Since, in Luft, one of the interfaces will be the working interface while the other interface will be the protecting interface, and a circuit identifier is associated to either a logical interface or a alternate interface in the layer 2/3 forwarding table, Luft has no need for a "detecting part detecting a ring switching request from a received signal, including identifiers of transmission apparatuses between which a failure occurs," as recited in the second clause of claim 1.

The final Office Action, in any case, asserts in the third full paragraph at page 4 that:

It would have been obvious to one skilled in the art to include a detecting part in the embodiment of Figure 8, in order to discover a switching request has been made so as to transmit data on a protection path.

Luft, to the contrary, mentions no switching *request* at all. In Luft, in fact, the BLSR performs *automatic* protection switching in response to the failure. In particular, as described at column 14, lines 16 and 17:

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The BLSR performs automatic protection switching in response to the failure.

It is submitted, therefore, that persons of ordinary skill in the art at the time the invention was made would not have been motivated to modify Loft, as proposed in the final Office Action, since, the BLSR performs automatic protection switching in response to the failure.

The final Office Action asserts further in the fourth full paragraph at page 4 that:

Furthermore, it would have been obvious to one skilled in the art to include identifiers of transmission apparatuses between which a failure occurs, so as to determine the apparatuses between which a failure has occurred.

In Luft, rather, the other nodes in the ring *already* update their cross connect tables and logical interfaces in accordance with the failure detected by the detecting node, as discussed above. Luft is complete in itself.

It is submitted, therefore, that persons of ordinary skill in the art of the time the invention was made would not have modified Luft is proposed in the final Office Action, since the other nodes in the ring already update their cross connect tables and logical interfaces in accordance with the failure detected by the detecting node. Claim 1 is submitted to be allowable. Withdrawal of the rejection of claim 1 is earnestly solicited.

Claims 2-5 depend from claim 1 and add additional distinguishing elements. Claims 2-5 are thus also submitted to be allowable. Withdrawal of the rejection of claims 2-5 is earnestly solicited.

Claims 7-11:

The second clause of claim 7 recites:

Detecting a ring switching request from a received signal, including identifiers of transmission apparatuses between which a failure occurs.

Loft neither teaches, discloses, nor suggests "detecting a ring switching request from a received signal, including identifiers of transmission apparatuses between which a failure occurs," as discussed above with respect to the rejection of claim 1.

The second clause of claim 7 recites further:

Wherein the ring switching request is sent from one of the transmission apparatuses that detects the failure, and at least one of the transmission apparatuses performs line switching after receiving the ring switching request that goes around the ring network.

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Loft neither teaches, discloses, nor suggests a "ring switching request is sent from one of the transmission apparatuses that detects the failure, and at least one of the transmission apparatuses performs line switching after receiving the ring switching request that goes around the ring network," as discussed above with respect to the rejection of claim 1.

The third clause of claim 7 recites:

> Obtaining an identifier from the ring switching request and concatenation setting information, corresponding to the identifier, from a concatenation setting information table that includes concatenation setting information for each identifier of transmission apparatuses forming the network.

Loft neither teaches, discloses, nor suggests "obtaining an identifier from the ring switching request and concatenation setting information, corresponding to the identifier, from a concatenation setting information table that includes concatenation setting information for each identifier of transmission apparatuses forming the network," as discussed above with respect to the rejection of claim 1. Claim 7 is thus submitted to be allowable, for at least those reasons discussed above with respect to the rejection of claim 1. Withdrawal of the rejection of claim 7 is earnestly solicited.

Claims 8-11 depend from claim 7 and add further distinguishing elements. Claims 8-11 are thus also submitted to be allowable. Withdrawal of the rejection of claims 8-11 is earnestly solicited.

Allowable Subject Matter:

The Applicant acknowledges with appreciation the indication that claims 6 and 12 contain allowable subject matter.

Conclusion:

Accordingly, in view of the reasons given above, it is submitted that all of claims 1-12 are allowable over the cited references. Allowance of all claims 1-12 and of this entire application is therefore respectfully requested.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

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      If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

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Respectfully submitted,

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